

S//N 10/614,264
Filed: 07/03/2003
Applicant: Michawel S. Rodgers
Examiner: C.Q. Nguyen

SPECIFICATION AMENDMENTS

1. Replace the paragraph starting on page 4 line 4 (starting with the words "Referring now to specific embodiments . . .") and ending on page 4 line 22 (ending with the words ". . . concrete slurry may be poured.") with the following:

Referring now to specific embodiments of the lightweight concrete construction components and several of its applications in the building construction business, additional benefits and advantageous features will be appreciated. One embodiment of the present invention is the formation of a slab (horizontal and/or vertical) between adjacent support members, like studs or joists. The support members are preferably metal and secured to a stem wall or other suitable load bearing structure. A retaining layer system, in the form of a metal lath and barrier is applied to the outer regions of the structural members. Extending the retaining ~~larger~~ layer system ~~access~~ across the outer region of the structural members completes a space into which a lightweight concrete slurry may be poured and thereafter allowed to cure to provide a strong, thermally insulating filler that has the ability to withstand severe impact, up to and including forces generated by storms or even high heeled foot traffic. In another embodiment, only one outer region of the structural members are covered by a retaining layer system. The remaining outer regions of the structural members are spanned by a removable ~~form~~ form, thereby completing a space into which a lightweight concrete slurry may be poured. In yet another embodiment, particular to horizontal components, a retaining ~~larger~~ layer system is fixed

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across a lower outer region of adjacent structural members to form space into which a lightweight concrete slurry may be poured.

2. Replace the paragraph starting on Page 8 line 6 (starting with the words "Each support member 20 may be bolted . . .") and ending on Page 8 line 18 (ending with the words ". . . space delineated by the insert.") with the following:

Each support member 20 may be bolted or otherwise secured to a load bearing structure 11 or 14. The separation between support members 20 may range between 16" to 30" between centers. In a preferred embodiment, the spacing is approximately 28" to 30" between centers. Walls 14 and/or load bearing structures 11 act as an end plate to complete the creation of a segmental form 30 between structural members 20. As shown in Figure 7, reinforcing members 34 can be fixed to adjacent structural members 20 to improve the strength of a horizontal slab 10. Furthermore, as shown in Figure 7, utility conduits 80 and stubs 82 can be placed within a segmented form 30 to allow the passage of electricity, water, sewage, telephone lines, data communication lines, and the like. It is further contemplated that openings (not shown) can be formed in a concrete component 10 by placing fixed or removable inserts (not shown) within a segmented form 30, thereby preventing a concrete slurry from occupying the space delineated by the insert.

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3. Replace the paragraph starting on Page 10 line 21 (starting with the words "Lath 32 can be in the form of a plurality . . .") and ending on Page 11 line 6 (ending with the words ". . . retaining larger system 36.") with the following:

Lath 32 can be in the form of a plurality of strips fixed adjacent to each other to form a plurality of apertures (not shown). In a preferred embodiment, lath 32 is in the form of a sheet having a plurality of apertures (See Figs. 4, 7, 9 and 10). Whether lath 32 is in strips or sheets, apertures are configured to primarily provide dimensional stability and secondarily allow the passage of a small quantity of a lightweight concrete slurry 50 from a segmented form 30. Such apertures can be circular, rectangular and/or polygonal. In a preferred embodiment, metal lath typically used as an underlying structure for receiving stucco can be included in a retaining larger layer system 36.

4. Replace the paragraphs starting on Page 11 line 15 (starting with the words "Where structural members 20 are horizontal . . .") and ending on Page 12 line 8 (ending with the words ". . . placed within a concrete form.") with the following:

Where structural members 20 are horizontal, typically there is no need for the retaining layer system 36 to confine the lightweight concrete at an upper region of a segmented form 30. Where the structural members 20 are vertical, a

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segmented form 30 is created by placing structural members 20 within a ~~reatining~~ retaining layer system 36 with at least one lath 36 positioned to retain a significant portion of a lightweight concrete slurry 50. Attachment of lath 36 is achieved by screwing or otherwise holding it against structural members 20. An alternative contemplates formation of a segmented section 30 by screwing or otherwise holding a lath 36 against an outer region of structural members 20 and opposite to a ~~tradional~~ traditional form structure removably fixed to another outer region of structural members 20. Once cured, the form structure is removed to expose a surface of the lightweight concrete 50.

The consistency of the lightweight concrete mixture 50 allows it to flow around features like utility conduits 80, studs ~~studs~~ stubs 82 or reinforcing members 34 within a segmental form 30. Furthermore, the consistency of the lightweight concrete slurry 50 allows some exuding through a lath 32. Such exuding makes lath 32 an integral part of a concrete component and further provides structural strength not unlike traditional reinforcing members placed within a concrete form.

5. Replace the paragraph starting on Page 13 line 1 (starting with the words "Using the poured-in-place construction . . .") and ending on Page 13 line 9 (ending with the words ". . . affordable construction with concrete.") with the following:

Using the poured-in-place construction method according to the present invention, creates a solid concrete component like a wall, ceiling, floor or roof,

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which is reinforced by structural members 20, lath 32 and ~~reinforcing~~
reinforcing members 34 (where used). Such a wall, floor, ceiling, or roof is non-flammable and possesses considerable strength. Once cured, the lightweight concrete slurry 50 and lath 32 provide a surface capable of resisting the strongest of impact forces, including forces generated by weather and/or foot traffic. With such attributes, structures erected with reinforced components using the methods of the present invention are ideally suited for low cost and affordable construction with concrete.

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